DOCUMENT RESUME

ED 188 227 CS 205 654

AUTHOR Johnson, Carolyn E.
TITLE A Taxonomy of Content for Internal Publications and the Editorial Mix Concept.
PUB DATE Aug 80
NOTE 37p.: Paper presented at the Annual Meeting of the Association for Education in Journalism (63rd, Boston, MA, August 9-13, 1980).

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS *Audiences: *Classification: *Editing: Employee Attitudes: Factor Analysis: *Media Research: Periodicals: *Publications: *Reading Interests: Surveys

ABSTRACT

A study was conducted to establish whether optimum editorial mixes (mixes of items selected from content categories determined from factor analysis) can be determined by publications editors in attempting to provide wide audience appeal with a minimum number of stories. A questionnaire was designed to determine employee opinions of the Tennessee Valley Authority employee publication "TVA Today," to identify reading interests and demographic characteristics of employees, and to determine the amount of interest generated by 33 article titles. Results, based on responses from 421 employees, suggested that eight stories, in the proper mixture, would account for almost as many readers as a mix with more stories, and that characteristics of the 33 stories could be reduced to eight basic factors or categories: (1) personal help (financial, domestic, and work): (2) leisure and outdoors: (3) people, philanthropy, and nostalgia: (4) company progress and power: (5) employee education: (6) company innovations: (7) history: and (8) social change. It was determined that the editorial mix of the eight factors would reach more than 77% of potential readers, only 6% fewer than would the entire population of 33 stories. The findings clearly demonstrated that an editorial mix systematically determined can be beneficial to editors. (GT)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U.S. DEPARTMENT OF HEALTH,
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

ED188227

Magazine Division

A TAXONOMY OF CONTENT FOR INTERNAL PUBLICATIONS AND THE EDITORIAL MIX CONCEPT

by

Carolyn E. Johnson

Associate Professor

Department of Communications
California State University
Fullerton, CA 92634

714-773-3517

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

Carolyn E. Johnson

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

CS 205 654

Presented to the Magazine Division, Association for Education in Journalism Annual Convention, Boston, Massachusetts, August, 1980.

INTRODUCTION

Background

One measure of company publication effectiveness is high readership. An important variable in stimulating readership is interesting editorial content. However, editors often are perplexed as to what constitutes "interesting" to an audience.

This poses complex questions for the editor when trying to meet the demands and expectations of many types of readers. For example, (1) How does the editor know how many stories are necessary to maintain wide audience coverage? and (2) How does the editor know what combinations of stories will sustain high reader demand?

While readership surveys provide insight into editorial content preferences, this study proposes that editors can determine the substance of their publications on something other than topical popularity ratings, for interest in news and in the whole publication has many dimensions. Westley (1972) questions, "Is there a pattern, a persistent structure, in the way people's interests are developed and persist?" (p. 319). This leads one to believe that perhaps there are some underlying content factors that survive over time. If this is true, it would be valuable to discover how stories cluster around these different content factors. With this information, an editor could better select a variety of stories, assuring a balance of content, or an "editorial mix," that reaches many readers. An effective editorial mix is a combination of stories that is read by many different readers in the total potential audience.

Haskins (1960, 1965a, 1965b) tested the usefulness of two research

techniques to discover editorial mixes: incremental analysis, which is a method of selecting stories on the basis of the proportion of readers each story adds to the mix; and empirical development of a "taxonomy" (categories) of content from which an editor may select a variety of stories.

His studies showed that developing an editorial mix using incremental analysis and category development methods yielded higher audience coverage than subjective selection.

The concern of an internal publications editor, then, is identifying the sources of variability in the reading audience and determining how to cope with that variability when planning publication content. Therefore, the intent of this study is to give an editor some guidance when planning editorial material. Most internal communication leaders agree that their publications play an important role in the total internal communications program. A crucial inquiry becomes, then, what to print to maintain optimum readership with a minimum number of editorial items.

The Problem

This investigation was prompted by several questions:

1. Can the minimum number of stories needed for maximum audience reach be determined?

2. Can editorial content categories be identified through data reduction of respondents' indications of interest in reading specified stories?

3. Can categories of content be described and labeled so they are useful to editors?

4. Can specific category stories be combined empirically to produce maximum audience reach?

Definition of Terms

Editorial content categories: Editorial items that cluster together to form a common "factor" or are represented in a combination of stories determined by a clustering technique. A category may be only one item, since other items with similar dimensions and content characteristics, although not included in this study, would reach the same audience. Categories will be determined from 33 story titles and synopses (see Appendix A) that have been rated on a scale of 1 to 100 on the basis of respondents' interest in reading each item.

Editorial mix: A mix of editorial items selected from each of the content categories, determined from factor analysis, that has wide audience reach with a minimum number of stories. Logically, there may be several mixes that obtain high audience coverage, since each story represents a different category, and therefore, adds some "new" readers to the total mix. An optimum mix is the mix of a story selected from each category that accounts for the highest proportion of readers.

Predicted readership: Specific stories employees definitely would be interested in reading in an internal publication. This is distinguished from readership, which implies actual stories, or portions of stories, read. Operationally, predicted readership is determined by a response of 100 on a scale ranging from 1 to 100, because a score of 100 means the story definitely would be read. The highest reader interest story is the story with the greatest percentage of readers who scored that story 100.

Taxonomy: "Classification, especially in relation to its principles or laws" (The living Webster dictionary, 1975, p. 1007). Here a taxonomy refers to the empirical classification of editorial items into groups or categories on the basis of their natural relationships. This will be accomplished through factor analysis of the previously mentioned 33 stories. The categories or classes that emerge are interpreted and labeled according to the underlying theme or dimension of each group.

Incremental analysis: Stories selected on the basis of the proportion of readers each story contributes in combination with other stories. For example, the first story selected may be the most popular one, i.e., the story that would definitely be read by the greatest number of respondents. The second story would be the one from those remaining that contributes the most additional readers and that accounts for the greatest proportion of readers when combined with the first. The additive process is continued until readership is no longer significantly increased.

Selection of the first story or any combination of specified stories is an arbitrary choice.

Limitations

Aside from the usual limitations of a study of this nature, e.g., validity of data collection instrument, subjective responses, timing and nature of data collection, there appear to be several limitations intrinsic to this research.

1. There is actually no assurance that the universe of possible content is included in this study. The classification is based on content and data as they appear in an existing data base. It is possible that editorial material and categories have yet to be discovered

and reported in the literature.

To claim that a taxonomy of editorial content represents a classification of all theoretically possible internal publications stories would be too ambitious at this stage.

2. Because the labeling of factors and taxonomical classes is a subjective exercise, it is probable that this initial analysis may not fully reveal the precise dimensions of all possible related editorial topics.

3. The nature of the data used here does not permit generalizing to the many varied types of internal publications. However, it is hoped that the classes in the taxonomy will be sufficiently general so that it is reasonable to hypothesize that they could apply to other types of internal publications.

Review of the Literature

Categories

Although classification studies are most apparent in the natural sciences, e.g., biology, zoology, and botany, examples can be found in such social sciences as psychiatry, sociology, library science, psychopathology, and geography; and there are current indications of interest in categorization of content in the communications literature. For example, Bateman (1975) surveyed employees in a midwest manufacturing plant and ranked "What Employees Want to Know--This Year" in order of interest level. His report includes an "eyeball" grouping of topics into categories. The 20 topics, according to his classification, fell into four categories: Company/Job-related Material, Company Policy

and "Health," Peripheral Subjects, and Non-company/Job-related Material. However, these categories were not tested and were purely subjective.

Two studies by Haskins in 1965 also demonstrate the value of categories. He rejects the idea that items that appear similar on the face form a category; hence, a reading interest category may be quite different from a subject matter category. He says,

> From the editor's viewpoint--and from the scientific viewpoint, too--we should be able to lay our hands on general categories rather than rely on specific items. A specific item is good for only one printing, then you have to look for more. But a category type--clearly defined, described and named--can be used over and over, each time using a different item representative of the category (1965a, p. 8).

In a study of the reading interest of Ford Times subscribers, Haskins (1965b) discovered three reading interest categories: Practical Vacations and Holidays, Feminine Diversion, and Automobile Racing. He suggests that these categories can be "of great potential usefulness to the editor" (p.10).

In 1974, Haskins again pursued the content categorization idea. He asked a sample of Tennessee Valley Authority (TVA) employees in the south to rate 33 actual or possible articles in terms of interest in reading each item. He used a 0 to 100 thermometer-like scale to measure interest. Then, the TVA editors devised content categories in much the same way as Bateman (1975). The categories were TVA Policies and Projects, Helpful Hints, Employee Benefits and Personnel Matters, Environment, Historical, Regional Development, and People.

Schramm (1949) was perhaps one of the first to recognize the possibility that there may be some general dimensions underlying news content that are not apparent in subjective analysis. He proposed two basic uses and functions of news: (1) immediate-reward and

(2) delayed-reward. Anast (1961) tested this proposition by gathering preference data on 130 hypothetical news items. Respondents were asked to rate the items on a seven-point scale indicating interest in reading them. The data were analyzed using factor analysis. Four factors emerged; two were the classic immediate-reward and delayed-reward factors. The remaining two were identified as a "vicarious-experience factor" and a "personal well-being factor" (pp.376-380).

A similar study using factor analysis was carried out by Stempel (1967). Stempel recognizes that there are several kinds of categories, ranging from war news to the traditional news values of timeliness and proximity. He asks whether it might be feasible to speculate that other dimensions determine reader interest in news. Using Haskins' thermometer-like scale (0-100), Stemple asked 225 Athens, Ohio, residents to rate headlines in terms of interest in reading the stories. The responses were factor analyzed. Eight factors emerged. They were subsequently labeled as follows: National Politics, Immediate Reward, Economic Activity, Public Health and Welfare, Artifact, Low Interest, Conflict-Suspense, and Leisure-Activity.

This finding reinforces the need to categorize editorial items on the basis of something other than what appears to be a "salient feature" (Kirsch & Banks, 1962). Such an unsystematic and subjective approach to categorization may be misleading in terms of dimensions that make news items appear similar and interesting to readers.

MacLean and Hazard (1953) used an interest rating of 51 news magazine pictures. Pictures that loaded high on the same factor were examined for possible common characteristics. They speculated on why the pictures of a factor went together empirically and why they

tended to elicit a response in common. The authors labeled the factors that emerged as Idolatry, Social Problems, Picturesqueness, War, Blood and Violence, and Spectator Sports. They concluded that such factoring analysis could provide new and purposeful ways for categorizing news pictures.

In summary, the literature suggests that factor analytic solutions to category development of editorial content for company publications can be useful. As MacLean (1965) points out,

> An editor chooses material to go into his news package on the basis of his comparative evaluations of the items he has available and what he suspects will become available before his deadline and what will fit. A reader scans for clues as to what among many alternatives might be worth his time (p. 616).

Empirically determined content categories may well assist both editor and reader in the selection process.

Editorial Mix

Literature regarding the editorial mix concept revealed several relevant studies, notably by Haskins and Donnahoe. An editorial mix is a combination of stories representing a variety of high and low reader interest stories.

Donnahoe (1957) took a theoretical approach and attempted to produce a "macroscopic theory of mass communications" on the basis of an editorial mix for newspapers. He suggests that attention to the aggregate effect of a group of items on an aggregate audience is more realistic than emphasis on item readership. "Editors," he said, "are required to take a macroscopic approach to the problem. They must be concerned with aggregates, with the total content of their paper, issue after issue, with the overall impact on their readers" (p. 444).

He used a department store manager's decisions regarding allocation of space by department and selection of merchandise in each department as analogous to decisions made by editors. The editor allocates space by content categories and selection of theories. The basic objective, according to Donnahoe, is, "The editor should select news and feature items and allocate them within space available in such a way as to maximize the satisfaction of total potential reader demand in terms of aggregate circulation" (p.445). Rather than looking at items individually, emphasis is switched to overall reader demand.

Haskins (1960) applied Donnahoe's conception of balance to magazine publication editing. He found that two items with high readership may be reaching the same audience, while a third item may reach a different, although smaller, group. Hence, the best two-item combination may not be the two highest ranking items, because they are reaching essentially the same audience.

The editorial mix concept, then, is useful to company publications editors interested in maintaining and increasing reader demand. Haskins (1965c) suggests that the taxonomy/editorial mix idea can contribute to the broader generalizations of "principles of editing." Because the editorial mix assumes the optimum number of necessary stories, this leaves a certain amount of space for the editor to use as he chooses. It's conceivable that this material may draw others into the publication.

This research proposes that every issue can be planned to meet the interests of almost everyone in the potential audience. Although an editor's judgment may never be replaced, such information can assist the editor in selecting from a supermarket of random topics.

Hypotheses

Editorial mix. One purpose of the editorial mix concept was to see how many stories are necessary before the number of "new" readers added to the mix was no longer significant. The rationale is that few stories that satisfy many different readers are as effective in covering reading interests as is the entire universe of stories, because, from the universe, some stories will be read by the same people. It was proposed that one story read by one group of readers would satisfy the reading interests of that segment of the audience. Another story read by a totally different group would satisfy that segment, and so on. The mix of stories that accounted for the highest proportion of readers and met the minimum inclusion criteria serves as the benchmark, "best" mix.

H_1: Optimum editorial mixes can be determined through empirical combinations of items.

Content categories. A taxonomy (classification) of story types can aid the editor in selecting a variety of different stories that satisfy a variety of reading interests. Therefore, factor analysis was used to explore reading interest category formation. The rationale is that this statistical technique will reflect underlying content dimensions not obviously apparent on the surface.

Additionally, categories were developed to explore the value of the editorial mix concept by choosing one story from each category. The rationale is that one story selected from each category will satisfy as many different reading interest groups.

H_2: A factor solution will be found for which the clusters of editorial items can be interpreted according to common content characteristics and dimensions.

H_3: Optimum editorial mixes can be determined by selecting one story from each empirically formed category.

Methodology

Data were collected by Dr. Jack B. Haskins, director of the Communications Research Center at the University of Tennessee, Knoxville. The purpose of his survey questionnaire was to determine opinions toward TVA Today, an employee publication for the Tennessee Valley Authority, and reading interest in a variety of topics for TVA publications. The reading interest section of the questionnaire appears in Appendix A.

Data Collection

Respondents. The population for this survey was all TVA employees in the southern United States.

Sample size. A random sample of 776 respondents was drawn with 421 usable responses for final evaluation, yielding a sampling error of .02 ($p = .50$).

Each job schedule group was treated as a separate population and a random sample drawn from each.

Questionnaire. The questionnaire was designed to measure the effectiveness of TVA Today, opinions toward the magazine, and to identify the reading interests of company employees and their demographic characteristics.

The second section of the questionnaire required respondents to rate 33 article titles on the basis of their interest in reading each article. Interest-rating data were collected by a technique

developed by Haskins (1960) called "title-rating." Respondents were asked to rate the actual or possible 33 titles and synopses of articles on a 0 to 100 thermometer-like scale according to the degree of interest the respondents may have in reading each article. 0 represented "extremely sure not to read" and 100 represented "extremely sure to read." For example, the respondents were asked to read the title and description of an item:

> THE BATTLE OF CHICKAMAUGA
> The entire Tennessee Valley was a Civil War battleground, but the fiercest fight of all was waged along a small creek near Chattanooga, where soldiers battled to overcome the mistakes of their commanders.

Then, from a diagram of a thermometer rating scale, they were asked to select a score that expressed how likely it would be that they would read the item if they saw it in a magazine.

Data Analysis

To analyze the data gathered for this study, two statistical techniques were used. These included incremental analysis and factor analysis.

Incremental analysis. Incremental analysis is a technique used to identify the "best mix" of stories for a publication issue, i.e., the mix that will account for the greatest number of readers with the fewest number of stories.

Using the "Select If" statement from the Statistical Package for Social Sciences (Nie, et al., 1975), stories were pulled into the mix one at a time. For example, the first story, an arbitrary choice, may be the one with the highest readership. The second story, then, is the one of those remaining which adds the most "new" readers

in combination with the first. The third is the one of those remaining which adds the most readers in combination with the first two. This process is continued until the desired saturation point is reached or until readership no longer significantly increases. A minimum increase of 1 per cent was set as a criterion for inclusion of a story in a mix.

A score of 100 was used to define predicted readership.

A test of differences of proportions was used to determine statistical significance between mixes and a "benchmark mix" (Blalock, 1970).

Factor Analysis. A principal axis factor solution was used with orthogonal rotation. Factors were extracted by means of establishing a minimum eigenvalue for factors. The analyst may request a specific number of factors without regard to a minimum eigenvalue. However, since a priori there was no rationale for a particular number of factors, no specific number was requested. Computer analysis was instructed to cease when a minimum eigenvalue of 1.0 was reached.

Following the factoring procedures, the factors were examined and interpreted according to the apparent underlying theme or characteristic of the items that correlated with each factor. Verbal prescriptions were developed for each category (factor) by item interpretation. Category labels were drawn from the literature when possible.

Results

Sample

The survey sample consisted of 776 randomly selected TVA employees representing a variety of characteristics. The response rate from this sample was 423, or 56 per cent. Two questionnaires were unusable.

Therefore, the acceptable return was 421 questionnaires. A Personal Characteristics Chart appears in Appendix B.

Hypothesis 1

The first hypothesis, that optimum editorial mixes can be determined through empirical combinations of items, was retained. It appears that eight stories, in the proper mixture, can account for almost as many readers as a mix with more stories. A rank order by predicted readership of the 33 stories used in this analysis appears in Table I. Table II shows the results of the incremental analysis using the highest predicted readership story first. The 1 per cent minimum increase criterion was supported through the eighth story. The graphic representation suggests an absolute maximum of eight stories (see Figure I).

This mix accounted for over 77 percent of the respondents. This means that 23 per cent would not read any of these stories. Or, with 83.4 per cent total audience reach with 33 stories, the remaining 25 articles would add only six per cent more readers. This mix was subsequently identified as the benchmark "best" mix.

Comparing the stories in this mix with the rank order of stories shows that the items are pulled from the spectrum of rankings. Table III shows this comparison.

The starting story for this mix, the highest predicted readership story, was an arbitrary choice. However, regardless of which story is used to generate the mix, the high readership items will invariably be drawn into the mix.

To explore this premise, the lowest predicted readership story, number three, "Strategy vs. Ideology," was used to generate a mix. The same items were drawn into this mix and in the same order, with

TABLE I

RANK ORDER OF 33 STORIES BY PREDICTED READERSHIP[a]

Item Number	Predicted Readership	Per Cent of Respondents	Mean Rating
15	188	44.9	82.1
4	181	43.0	77.1
22	154	36.8	76.8
27	143	34.2	73.8
14	137	32.5	71.1
12	131	31.1	70.5
8	129	30.7	74.2
21	115	27.4	67.5
23	111	26.5	70.7
5	111	26.4	70.1
11	109	26.0	61.7
25	108	25.8	65.5
9	105	25.0	70.2
29	95	22.7	59.6
16	92	22.0	64.7
19	91	21.8	63.5
17	90	21.5	62.5
33	88	21.0	63.3
24	81	19.3	63.6
28	80	19.1	63.9
18	78	18.6	55.3
20	75	17.9	58.8
31	72	17.2	59.3
32	72	17.2	54.6
2	72	17.1	58.4
7	69	16.4	52.3
26	64	15.3	59.5
13	64	15.2	50.9
6	58	13.9	58.6
1	57	13.6	54.7
10	48	11.4	55.9
30	33	7.9	45.9
3	32	7.7	42.8
Per Cent of Audience Reach with 33 Items[b]	351	83.4	65.3

[a]Frequency of response of 100.

[b]70 respondents (16.6%) would not read any of these stories, as defined by a score of 100.

TABLE II

EDITORIAL MIX AND AUDIENCE REACH
WITH HIGHEST PREDICTED READERSHIP STORY FIRST

Item Number	Absolute Frequency	Incremental Frequency	Incremental %	Cumulative %
15	188	188	44.7	44.7
4	181	68	16.2	60.9
12	131	27	6.4	67.3
14	137	14	3.3	70.6
32	72	10	2.4	73.0
29	95	7	1.7	74.7
25	108	6	1.4	76.1
33	88	5	1.2	77.3
Total[a]		325	77.3	77.3

[a]96 readers (23%) would not read any of these stories.

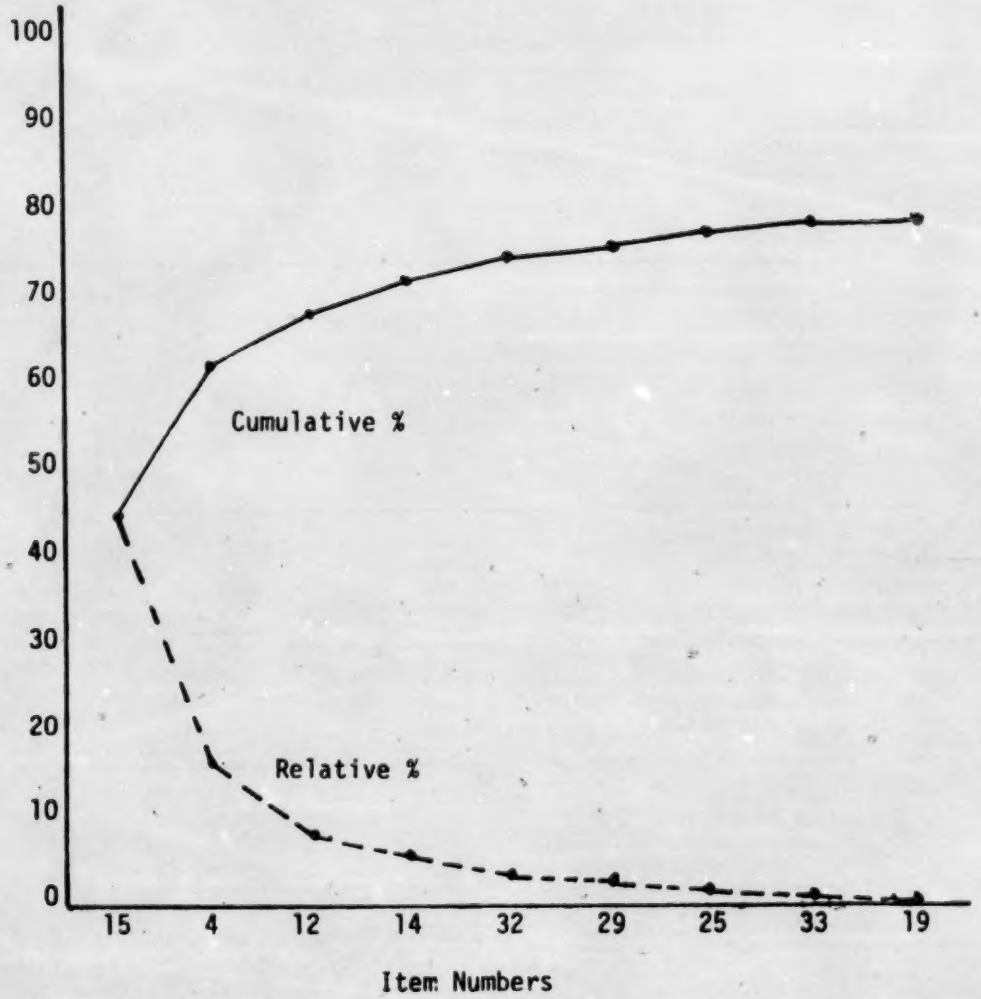


Figure I. Graphic representation of stories in a mix with highest predicted readership item first (#15).

TABLE III

COMPARISON OF EDITORIAL MIX WITH RANK ORDER

Item Number	Rank
15	1
4	2
12	6
14	5
32	24
29	14
25	12
33	18

the exception of number 25. Again, an eight-item mix was stipulated by the 1 per cent criterion. However, there was a significant difference between audience reach with this mix and the mix with the highest predicted readership story first ($z = 1.938$). The mix accounted for 70.5 per cent of the respondents.

So eight stories in an editorial mix are the optimum number of stories necessary before audience reach no longer significantly increases. The mix of stories with the highest predicted readership story first was labeled the "benchmark mix."

Hypothesis 2

The second hypothesis, that a factor solution will be found for which the groups of editorial items can be interpreted according to common content characteristics and dimensions, was retained. The intent was to see if the 33 stories (variables) could be reduced to one or several basic ones. To do this, the correlation matrix of respondents' ratings of the stories was submitted to R factor analysis. The factor solution with orthogonal rotation produced eight factors.

Six factors were suggested by the Scree test. Humphrey's rule suggested that all eight factors in the analysis were meaningful. Therefore, the eight factors were retained for further analysis, because it was possible to name all factors and the premise of this study is that each factor (category) represents a content area of interest to a certain proportion of the audience although it may be small. The factor solution accounted for 48.1 per cent of the common variance (see Table IV). Each story was identified with a factor by the highest loading. Table IV shows that every item met the .33 criterion. The portion of an item's

TABLE IV

ORTHOGONAL FACTOR SOLUTION MATRIX FOR ITEMS

Item Number	Factor I	Factor II	Factor III	Factor IV
1	.1062	.0117	.1837	.1113
2	.3762	.0253	-.0018	.0486
3	.0336	.0043	.1009	.1049
4	.4358	-.1971	.0586	.3172
5	.5493	.1205	.0152	.1961
6	.3013	.1796	.1051	.4088
7	.2700	.1885	.2725	.0832
8	.3622	-.1277	.1431	.2983
9	.0212	.1439	.1019	.1897
10	.0731	.2094	.2455	.1233
11	.5229	.1130	.0781	.1748
12	.3340	.3938	.1832	.1539
13	.2773	.2553	.2030	.0544
14	.0294	.1310	.1645	.2200
15	.1393	.0944	-.0398	.4626
16	.1048	.1814	.1803	.1442
17	.1372	.6038	.0923	.1136
18	.6441	.1997	.1716	-.0236
19	.4527	.2419	.3009	.0235
20	.1571	.1988	.5860	.1154
21	.0068	.2246	.1941	.1642
22	.1899	.2364	.1728	.5705
23	.0613	.4877	.1860	.4817
24	.1195	.3359	.3000	.3606
25	.3430	.1946	.2635	.0505
26	.2292	.1632	.5539	.0006
27	.1841	.1254	.2363	.5818
28	.1527	.4738	.3086	.2795
29	.1811	.6556	.2193	.0989
30	.1942	.1329	.4838	.2748
31	.0892	.2601	.4993	.1823
32	.1207	.1918	.5012	.1649
33	.0139	.0521	.5143	.4127

TABLE IV (continued)

Item Number	Factor V	Factor VI	Factor VII	Factor VIII	Commun-ality
1	.0411	.0537	.0871	.6233	.4586
2	.1689	.0740	-.1658	.3722	.3215
3	.3507	.1169	.0688	.1449	.1847
4	.0657	.1012	.0171	.2371	.4038
5	.0828	.1901	-.1389	-.0238	.4178
6	-.0128	.1851	.2379	.2088	.4358
7	-.0103	.5151	.1430	.2583	.5422
8	.3740	.3490	.1417	.0146	.5389
9	.2945	.6926	.0855	.0778	.6474
10	.1719	.5122	.1484	.0320	.4396
11	.0647	-.0847	.0969	.1315	.3609
12	.1035	.0037	.1151	.1904	.3940
13	.1241	.0907	.0748	.3727	.3544
14	.1357	.1221	.6037	.0888	.4992
15	.4168	.2029	.2576	.2056	.5673
16	.5726	.1447	.1784	-.0391	.4794
17	.1474	.2128	.3773	.0519	.6169
18	-.0301	.0666	.1211	.0882	.5125
19	.3255	.1116	.0495	.0630	.4794
20	-.0003	.1336	.1712	.3227	.5721
21	.2866	.1393	.5084	.0428	.4770
22	.1508	.0631	.2230	.0128	.5239
23	.3347	.1517	.0255	.1249	.6596
24	.1458	.1400	.1464	.2124	.4545
25	.3480	.0416	.0606	.1603	.3798
26	.2391	.1150	.0669	.3518	.5846
27	.1562	.1249	.1297	.0395	.5023
28	.2256	.2309	.0572	-.0482	.5310
29	-.0095	.1259	.1172	.0378	.5516
30	.3328	.0784	.1349	.0519	.5027
31	.0940	.0841	.3618	.0577	.5083
32	.2200	.2235	.0845	-.0011	.4353
33	.1178	.2394	.0599	.1858	.5469

variance accounted for by this minimum loading is approximately 10 per cent.

Category Labels

The factors (categories) from Table V were subsequently named and described as follows:

Category I. Personal Help: Financial, Domestic, and Work

Editorial content in this category addresses personal financial concerns of employees. Such topics may include preparing budgets and financial planning, how to save money on domestic necessities, and planning for retirement. Also included in this category is information that helps employees to live their domestic and work lives more comfortably. In short, stories in this category answer questions regarding personal well-being.

Category II. Leisure and Outdoors

This category includes information about little known places to vacation and to enjoy the outdoors. Furthermore, the content may address conservation of the environment and nature to preserve the outdoors for leisure time activites.

Category III. People, Philanthropy, and Nostalgia

News about fellow employees and what these employees are doing outside the company falls into this category. The articles may appeal to the philanthropic interests of readers and their nostalgic needs. Messages from management are also appropriate here. These are "happy" articles that appeal to the emotions.

Category IV. Company Progress and Power

Company progress and information about the direction of the company

TABLE V

STORIES IN EACH FACTOR, ORTHOGONAL SOLUTION

Factor	Item Number	Story Title
I	2	Luxury on a Budget
	4	Will I Be Able to Live on My Retirement Income?
	5	How to Buy Appliances Which Use Less Electricity
	11	When Should I File A Grievance?
	18	Has Debt Got You Down?
	19	Environmental Cleanup Starts at Home
II	12	Valley of Happenings
	17	Wildlife at Land Between the Lakes
	23	How Clean is the Tennessee River?
	28	Helping Fish to Breathe
	29	Wilderness Camping
III	20	TVA's Country Doctor
	26	Employees Lend a Helping Hand
	30	Region Builders
	31	Ferries on the River
	32	What's Ahead for TVA's Fertilizer Center?
	33	Saltville Revisited
IV	6	Men in the Sky
	15	Nuclear Power: Boon or Bane?
	22	The Crack at Fontana
	24	Oak Ridge: The Atomic City
	27	The Raccoon Mountain Project
V	3	Strategy vs. Ideology
	8	What About Power Rates?
	16	Atmospheric Chemistry: The Key to Clean Air?
	25	Better Jobs Through Education
VI	7	Strawberries in December
	9	Vegetables from Waste Heat
	10	Soybeans: A New Cash Crop
VII	14	The Battle of Chickamauga
	21	Uncovering the Past
VIII	1	The World's Friendliest Policemen
	13	Women in Men's Jobs

is important content in this category. It is characterized by power-generating techniques used by the company to provide its service or produce its product. It may also include the misuse of power and explanatory material that helps employees to understand these complex techniques. This category contains the kind of information that will assist the employees in discussing their company with other people.

Category V. Employee Education

This category contains two dimensions of education: (1) Education for employees, to include information about company benefits; and (2) education for better living in society, to include information about complex social, economic, and political issues. The articles are instructional in nature and may appeal to basic needs.

Category VI. Company Innovations

Articles that inform employees about company research and development projects and about new technology characterize this category. The articles address discovery of new products, processes, equipment, and technology relevant to the company or the geographic area. The content may include information about how these discoveries and experiments will conserve energy and materials or contribute to the advancement of the company or region.

Category VII. History

This category clearly contains content of historical significance to the region in which employees live and work.

Category VIII. Social Change

Editorial content in this category pertains to the changing roles of employees, particularly in reference to men and women. The articles

may also reflect social change and current trends regarding these changing roles.

Hypothesis 3

This hypothesis, that optimum editorial mixes can be determined by selecting one story from each empirically formed category, was retained. The purpose here was to determine if items selected from the selected category development method would account for nearly as many readers as the ideal benchmark mix with 77.3 per cent audience reach.

Table VI shows that 74.8 per cent of the audience could be reached with the highest reader interest item from each category, and Table VII shows that 71.3 per cent could be reached with randomly selected items from each category.

These results suggest that categories of content can be most helpful when used in conjunction with reader interest surveys. Categories can be used to generate article ideas and interest surveys to pretest the popularity of the ideas.

Summary and Conclusions

Using Haskins' (1960, 1965a, 1965b) "principles of editing" as an organizing paradigm, this research tested mixes of stories from categories developed by a data reduction method. It was hypothesized that an optimum editorial mix could be determined and that categories of content could be determined from which a variety of mixes may be selected.

An editorial mix of eight items was found to account for only six per cent fewer readers than the entire population of 33 stories. This mix, obtained through incremental analysis, would reach over 77 per cent

TABLE VI

EDITORIAL MIX AND AUDIENCE REACH
WITH HIGHEST PREDICTED READERSHIP STORIES FROM CATEGORIES

Item Number	Absolute Frequency	Incremental Frequency	Incremental %	Cumulative %
4	181	181	42.9	42.9
12	131	47	11.2	54.1
33	88	20	4.8	58.9
15	188	43	10.2	69.1
8	129	6	1.4	70.5
9	105	5	1.2	71.7
14	137	10	2.4	74.1
13	64	3	.7	74.8
Total[a]		315	74.8	74.8

[a]106 readers (25.2%) would not read any of these stories.

TABLE VII

EDITORIAL MIX AND AUDIENCE REACH
WITH RANDOMLY SELECTED STORIES FROM CATEGORIES

Item Number	Absolute Frequency	Incremental Frequency	Incremental %	Cumulative %
4	181	181	42.9	42.9
23	111	41	9.7	52.6
31	72	15	3.6	56.2
27	143	25	5.9	62.1
25	108	16	3.8	65.9
10	48	6	1.4	67.3
14	137	14	3.3	70.6
13	64	3	.7	71.3
Total[a]		301	71.3	71.3

[a]120 respondents (28.5%) would not read any of these stories.

of the potential readers. Also, items rated high by many readers and items rated high by a minority of readers were contained in the mix. The most popular items were invariably brought into the mix regardless of what story was selected to generate the mix. However, some items that did not account for as many readers as the highest ranked items did contribute a substantial number of "new" readers. For example, the two items that ranked highest on predicted readership were in the mix and also an item that ranked twenty-fourth. This confirms the notion that audience reach can be increased with the proper mixture of high and low ranking stories.

Also, it was hypothesized that categories of content would be a useful tool. Then, editors could more systematically select eight stories representing a variety of story types. Factor analysis of respondents' ratings of interest in reading the 33 stories used for analysis produced eight factors--or categories. The categories from factor analysis were labeled as follows: Personal Help: Financial, Domestic, and Work; Leisure and Outdoors; People, Philanthropy, and Nostalgia; Company Progress and Power; Employee Education; Company Innovations; History; and Social Change. These labels were selected to reflect as closely as possible the underlying content dimensions of each category.

At this point, editorial mixes were formed by selecting one item from each category. The intent was to determine if these mixes could reach as many readers as the ideal benchmark mix. The mix with the highest reader interest item selected from each category accounted for 74.8 per cent of the potential audience. This was not significantly different from the benchmark mix. A mix of randomly selected items

from the eight categories accounted for 71.3 per cent of the audience, again, not significantly different.

This research clearly demonstrated that an editorial mix systematically determined can be beneficial to editors. With the knowledge that there is an optimum number of stories necessary before reader interest no longer increases, an editor can then search for stories that match these interests and use the space that remains to test other information needs or practice individual creative inclinations. This was expected as a result of the analysis done by Haskins (1960, 1965a, 1965b). Closely related to this premise, however, is that the editor must know what broad content areas will touch the reading interests of a particular audience. Therefore, a taxonomy of company publication content can aid the editor in selecting the optimum editorial mix.

Appendix A

Page 2

Reading Interests

We'd like to know how interested you might be in reading different kinds of magazine articles and features. Just read each of the titles below, then give each one a score from zero to 100.

To get started, just read the title and description of Item 1 at the bottom of this page.

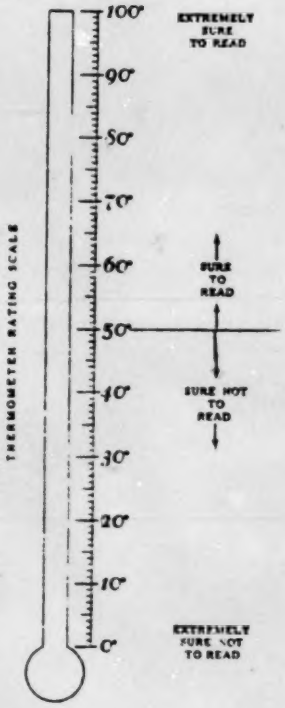
Then, look at the "thermometer rating scale" at right and pick the score that expresses how likely it is that you would read that item if you saw it in a magazine.

If you are positive you would not read it, give it a score of zero, like this. 0

If you're positive you would read it, give it a score of 100, like this. 100

If you're not positive, give it any score that best expresses your chance of reading it, from 1 to 99.

Ready? Now please write in your reading interest score for Item 1 below, and proceed to score all the items listed. (Remember, you may use any number from zero to 100 for any or all items.)



WRITE IN YOUR THERMOMETER SCORE OF ITEM HERE

(R1) THE WORLD'S FRIENDLIEST POLICEMEN, by John Burton — ITEM 1
A Pineville policeman will speed 100 miles to help a citizen with car trouble--or cook supper for the kids when mama has to rush to the hospital. To the 4,500 souls of this small New Jersey town, their cops are the greatest.

(R2) LUXURY ON A BUDGET, by Harry P. Reynolds — ITEM 2
How the Matthews family can now afford a much fuller and more pleasant life, even on a limited income.

(R3) STRATEGY VS. IDEOLOGY, Louis J. Halle — ITEM 3
Has the ideological passion of our people, with its implicit hostility to strategical policies, created a prime political dilemma--as the author contends?

(Reading Interests Continued)

WRITE IN SCORE BELOW

(R4) WILL I BE ABLE TO LIVE ON MY RETIREMENT INCOME?
Five TVA retirees discuss their personal 'battles of the budget' and offer advice on retirement planning. ITEM 4

(R5) HOW TO BUY APPLIANCES WHICH USE LESS ELECTRICITY
By referring to energy efficiency ratings, you can select air conditioners that can save up to 50 percent on electricity. ITEM 5

(R6) MEN IN THE SKY
Ironworkers daily defy gravity as they scale the heights to build transmission lines and power plants. ITEM 6

(R7) STRAWBERRIES IN DECEMBER
In its early days, TVA pioneered quick-freezing processes and helped introduce frozen foods to America's housewives. ITEM 7

(R8) WHAT ABOUT POWER RATES?
An explanation of the ungovernable cost factors behind the steadily rising rates for electric power. ITEM 8

(R9) VEGETABLES FROM WASTE HEAT
Does heat created in the process of generating electricity necessarily have to be "waste"? Small-scale TVA experiments indicate that the answer is "no." ITEM 9

(R10) SOYBEANS: A NEW CASH CROP
The growth of U.S. agricultural exports plus a new interest in low-cost sources of protein have combined to create a major new cash crop for Tennessee Valley farmers. ITEM 10

(R11) WHEN SHOULD I FILE A GRIEVANCE?
The Director of Personnel discusses examples of grievances which have helped correct unfair treatment of employees. ITEM 11

(R12) VALLEY OF HAPPENINGS
What to see and where to go on your vacation in the Tennessee Valley. ITEM 12

(R13) WOMEN IN 'MEN'S JOBS'
From truck drivers, to welders, to engineers, to managers, women do it all in TVA. ITEM 13

(R14) THE BATTLE OF CHICKAMAUGA
The entire Tennessee Valley was a Civil War battleground, but the fiercest fight of all was waged along a small creek near Chattanooga, where soldier battled to overcome the mistakes of their commanders. ITEM 14

(R15) NUCLEAR POWER: BOON OR BANE?
Behind the smoke screen of scare tactics and unfounded mumbo-jumbo, the real facts about nuclear safety are quite reassuring. ITEM 15

(Reading interests continued)

WRITE IN SCORE BELOW

(R16) ATMOSPHERIC CHEMISTRY: A KEY TO CLEAN AIR?
Atmospheric chemistry is a complex subject. But TVA's study of it may ultimately unlock some of the puzzles in the quest for cleaner air. — ITEM 16

(R17) WILDLIFE AT LAND BETWEEN THE LAKES
Protection, good management, and carefully controlled hunting have been combined to produce a thriving wildlife population. — ITEM 17

(R18) HAS DEBT GOT YOU DOWN?
TVA credit unions can help members balance their budgets and learn to live within their incomes. — ITEM 18

(R19) ENVIRONMENTAL CLEANUP STARTS AT HOME
What you can do to help! — ITEM 19

(R20) TVA'S 'COUNTRY DOCTOR'
Jim Craig is a young man committed to seeing that rural folks have as good health care as their city cousins. — ITEM 20

(R21) UNCOVERING THE PAST
Archaeologists find evidence of 'modern' civilizations which existed in the Valley hundreds of years before the coming of the white man. — ITEM 21

(R22) THE CRACK AT FONTANA
An explanation of the causes that brought about the troublesome crack in Fontana Dam and the steps TVA is taking to repair it. — ITEM 22

(R23) HOW CLEAN IS THE TENNESSEE RIVER?
Most rivers start out clean and get dirtier. But on the Tennessee, water quality improves steadily as the water moves downstream. — ITEM 23

(R24) OAK RIDGE: THE ATOMIC CITY
From backwoods country crossroads to a center for development of peaceful uses of the atom, this is the story of Oak Ridge. — ITEM 24

(R25) BETTER JOBS THROUGH EDUCATION
Employees may soon be able to receive reimbursement for all courses required for a college degree, whether related to their jobs or not. — ITEM 25

(R26) EMPLOYEES LEND A HELPING HAND
Using their money and their skills, TVA folks have voluntarily helped start a health clinic, stock a library, and build an outdoor learning center. — ITEM 26

PLEASE BE SURE YOU'VE SCORED EVERY ITEM ABOVE, THEN GO TO NEXT PAGE

(Reading Interests Continued)

WRITE IN SCORE BELOW

(R27) THE RACCOON MOUNTAIN PROJECT

At first glance, pumped-storage power generation seems a bit akin to pulling oneself up by one's own bootstraps. But closer examination reveals that it makes good economic sense.

ITEM 27 [ ]

(R28) HELPING FISH TO BREATHE

The welfare of fish below some of TVA's dams is hindered at times by oxygen shortages. But TVA is testing different remedies, including artificial injection from giant oxygen tanks.

ITEM 28 [ ]

(R29) WILDERNESS CAMPING

Developed camping areas over the Tennessee Valley are well known. But few are aware of the opportunities that also exist for a wilder, more primitive variety of camping.

ITEM 29 [ ]

(R30) REGION BUILDERS

Ed Cobb of Huntsville is an effective spokesman for America's public power interests.

ITEM 30 [ ]

(R31) FERRIES ON THE RIVER

Even with modern highways and interstates, four ferries remain as a reminder of more tranquil days gone by.

ITEM 31 [ ]

(R32) WHAT'S AHEAD FOR TVA'S FERTILIZER CENTER?

Cost squeezes have forced cutbacks and operational shifts. The manager answers questions about what route the center is likely to follow from here.

ITEM 32 [ ]

(R33) SALTVILLE RE-VISITED

In 1971, 900 men and women in Saltville, Virginia, lost their jobs because strict water quality standards forced closing of the town's only industry. But after two years, the community's spirits remain high.

ITEM 33 [ ]

PLEASE BE SURE YOU'VE SCORED EVERY ITEM ABOVE, THEN GO TO NEXT PAGE

APPENDIX B

PERSONAL CHARACTERISTICS

Characteristic	Frequency	% Responding
1. Age		
Less than 24	10	2.4
25-34	71	16.9
35-44	106	25.2
45-54	128	30.4
55-64	102	24.2
65 and over	3	.7
Missing cases	1	.2
Total	421	100.0
2. Sex		
Male	385	91.4
Female	34	8.1
Missing cases	2	.5
Total	421	100.0
3. Education		
1-8 years	24	5.8
9-12 years	133	33.7
13-16 years	171	40.7
17 years or more	83	19.8
Total	421	100.0
4. Tenure at TVA		
1-10 years	197	46.8
11-20 years	94	22.3
21-30 years	94	22.3
31-40 years	29	6.9
Missing cases	7	1.7
Total	421	100.0
5. Job Classification		
Management	139	33.0
Annual Salary Policy	122	29.0
Annual Trades and Labor	84	20.0
Hourly Trades and Labor	62	14.7
Hourly Salary Policy	9	2.1
Missing cases	5	1.2
Total	421	100.0

LIST OF REFERENCES

Anast, P. Attitude toward the press as a function of interest. Journalism Quarterly, 1961, 38, 376-380.

Bateman, D. N. What employees want to know--this year. Journal of Organizational Communication. 1975, 5(1), 10-11.

Blalock, H. M., Jr. Social statistics. New York: McGraw-Hill, 1972.

Donnahoe, A. S. Mass communication theory: A macroscopic approach. Journalism Quarterly, 1957, 34(4), 443-451.

Haskins, J. B. "Editorial Mix" analysis of the reading interests of Ford Times subscribers. Unpublished report prepared for the Publications Office, Ford Motor Co., September, 1965b.

Haskins, J. B. Final report: Survey of employees on TVA publications. Knoxville, Tenn.: TVA Publications Office, 1974.

Haskins, J. B. Pretesting editorial items and ideas for reader interest. Journalism Quarterly, 1960, 37, 224-230.

Haskins, J. B. Research to resolve the dilemma of cultural democracy vs. mass media responsibility: The editorial mix revisited. Unpublished paper presented at Association for Education in Journalism Convention, August 22-26, 1965a.

Kirsch, A. D., & Banks, S. Program types defined by factor analysis. Journal of Advertising Research, 1962, 2(3), 29-31.

MacLean, M.S., Jr. Some multivariate designs for communications research. Journalism Quarterly, 1965, 42(4), 614-622.

MacLean, M.S., Jr., & Hazard, W. Women's interest in pictures: The Badger Village study. Journalism Quarterly, 1953.

Schramm, W. The nature of news. Journalism Quarterly, 1949, 26, 259-269.

Stempel, G. H., III. A factor analytic study of reader interest in news. Journalism Quarterly, 1967, 44(2), 326-330.

Westley, B. H. News editing. New York: Houghton-Mifflin Co., 1972.